

AMENDMENTS TO THE CLAIMS

Please amend claims 1-34.

Please add claims 35-38.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method ~~Method~~ for refining paper fibers or cellulose fibers in aqueous suspension in which the fiber stock is guided through at least one refining zone lying between refining surfaces (1,2), in which the refining surfaces (1,2) lie on refiner tools pressed against one another, whereby mechanical refining action is transferred to the fibers such that the strengths of the paper produced therefrom are changed, whereby the refining surfaces (1,2) are moved relative to one another such that, at ~~the a~~ point at which two ~~of the~~ refining surfaces (1,2) are closest in the refining zone, ~~the a~~ relative speed between the fiber stock and the refining surfaces, seen in ~~the a~~ main direction of movement of the refining surfaces, is no more than 10% of ~~the an~~ absolute speed of the refining surface moved quickest, ~~characterized in that wherein~~ at least one of the refining surfaces (1,2) interacting in the refining zone is porous.
2. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that wherein~~ both of the refining surfaces (1,2) interacting in the refining zone are porous.
3. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that wherein~~ the porous refining surface (1,2) is formed by a material layer (7, 7', 8, 8') open-pored at least to the refining surface (1,2).

4. (Currently Amended) The method ~~Method~~ according to claim 3, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed of sintered material.
5. (Currently Amended) The method ~~Method~~ according to claim 4, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed mainly of chromium steel.
6. (Currently Amended) The method ~~Method~~ according to claim 4, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed mainly of hard metal.
7. (Currently Amended) The method ~~Method~~ according to claim 4, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed mainly of a copper alloy.
8. (Currently Amended) The method ~~Method~~ according to claim 4, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed mainly of ceramic.
9. (Currently Amended) The method ~~Method~~ according to claim 4, ~~characterized in that~~ wherein the material layer (7, 7', 8, 8') is composed mainly of plastic.
10. (Currently Amended) The method ~~Method~~ according to claim 3, ~~characterized in that~~ wherein the layer thickness of the material layer (7, 7', 8, 8') is at least 1 mm and no more than 30 mm, ~~preferably 10—20 mm.~~
11. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the average pore width of the porous refining surface (1, 2) is smaller than 0.5 mm.
12. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein, at the point at which two refining surfaces (1, 2) are closest to one another in the refining zone, the relative speed between the fiber stock and the refining surfaces seen in the

main direction of movement of the refining surfaces (1,2), is less than 5% of the absolute speed of the refining surface (1,2) moved quickest.

13. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the relative movement of the refining surfaces (1,2) in the refining zone is a rolling movement.

14. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the mechanical refining action is transferred by compressing the fiber stock.

15. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein at least one refining surface (1,2) is provided with refiner bars (5, 5', 6, 6') running crosswise to the main direction of movement of the moved refining surface.

16. (Currently Amended) The method ~~Method~~ according to claim 15, ~~characterized in that~~ wherein the refiner bars (5, 5', 6, 6') have a height of at least 2 mm and a width in the direction of movement of the moved refining surfaces of at least 2 mm.

17. (Currently Amended) The method ~~Method~~ according to claim 15, ~~characterized in that~~ wherein both refining surfaces (1,2) are provided with refiner bars (5, 5', 6, 6') running crosswise.

18. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the absolute speed of at least one refining surface (1,2) is kept at a value between 5 and 30 m/sec.

19. (Currently Amended) The method Method according to claim 1, ~~characterized in that~~ wherein the refining surfaces (1, 2) are pressed against one another such that a linear force between 2 and 10 N/mm is generated in the refining zone.
20. (Currently Amended) The method Method according to claim 1, ~~characterized in that~~ wherein at least one of the refiner tools has gaps, ~~in particular tooth gaps (20)~~ on the refining surface (1, 2), which gaps are moved in the refining zone such that they transport the suspension (S) through the refining zone in the direction of movement of the refiner tools.
21. (Currently Amended) The method Method according to claim 20, ~~characterized in that~~ wherein the gaps are emptied of the fibers outside the refining zone.
22. (Currently Amended) The method Method according to claim 21, ~~characterized in that~~ wherein the emptying of the gaps is carried out by centrifugal forces.
23. (Currently Amended) The method Method according to claim 20, ~~characterized in that~~ wherein one of the refiner tools is a refiner cylinder (3, 3', 3'') and that the other refiner tools are refiner rolls (4, 4') arranged parallel thereto and set in a rolling motion on the circumferential surface of the refiner cylinder (3, 3').
24. (Currently Amended) The method Method according to claim 23, ~~characterized in that~~ wherein the refiner cylinder (3, 3', 3'') is driven and that the refiner rolls (4, 4') rotate about spatially fixed axes.
25. (Currently Amended) The method Method according to claim 23, ~~characterized in that~~ wherein the refiner cylinder (3', 3'') is provided with cylindrical porous surface and that the gaps are located on the circumference of the refiner roll.

26. (Currently Amended) The method ~~Method~~ according to claim 23, ~~characterized in that~~ wherein refiner cylinders (3, 3', 3'') and refiner rolls (4, 4') lie essentially horizontally and that the direction of the suspension transport through the refining device used is essentially the circumferential movement of the refiner cylinder.

27. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the compressive forces for refining the paper or cellulose fibers are transferred to surfaces on which the refiner tools roll against one another.

28. (Currently Amended) The method ~~Method~~ according to claim 23, ~~characterized in that~~ wherein the diameter of the refiner cylinder (3, 3', 3'') is at least 1 ½ times, ~~preferably at least~~ twice the diameter of the refiner roll (4, 4').

29. (Currently Amended) The method ~~Method~~ according to claim 28, ~~characterized in that~~ wherein the refiner rolls are arranged close together on the circumference of the refiner cylinder (3, 3', 3'') so that as many refining zones as possible are formed on one refiner cylinder.

30. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the refining is carried out on a suspension guided constantly through the refining device used.

31. (Currently Amended) The method ~~Method~~ according to claim 1, ~~characterized in that~~ wherein the aqueous suspension is fed into the refining device used with a consistency of 1 – 6 %.

32. (Currently Amended) The method Method according to claim 1, ~~characterized in that wherein~~ the aqueous suspension is fed into the refining device used with a consistency of 6 – 15 %.
33. (Currently Amended) The method Method according to claim 1, ~~characterized in that wherein~~ the aqueous suspension is fed into the refining device used with a consistency of 15 - 25 %.
34. (Currently Amended) The method Method according to claim 1, ~~characterized in that wherein~~ the force with which the refiner tools respectively forming a refining zone are pressed together is adjustable, ~~in particular can be adjusted differently for various refining zones.~~
35. (New) The method according to claim 10, wherein the layer thickness of the material layer is 10 – 20 mm.
36. (New) The method according to claim 20, wherein the gaps are tooth gaps on the refining surface.
37. (New) The method according to claim 28, wherein the diameter of the refiner cylinder is at least twice the diameter of the refiner roll.
38. (New) The method according to claim 34, wherein the force is adjusted differently for various refining zones.